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E7.6-10334
CR-147218

THIRD QUARTERLY (TYPE II) PROGRESS REPORT

Project Title: Development of a Multi-disciplinary ERTS
User Program in the State of Ohio
Ref. 20900

Contract Number: NAS5-22399

Principal Investigator: Paul E. Baldridge
Deputy Director for Community Services
Department of Economic and Community Development
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March 10, 1975

(E76-10334) DEVELOPMENT OF A
MULTI-DISCIPLINARY ERTS USER PROGRAM IN THE
STATE OF OHIO Progress Report (Ohio Dept.
of Economic and Community) 4 p HC \$3.50

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Prepared for: GODDARD SPACE FLIGHT CENTER
Greenbelt, Maryland 20771

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Scientific Investigation Support,
Code 902.6
Contract No. NAS5-22399
ERTS Investigation No. 20900
ITEMS No. 1&2

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MAY 24 1975

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SECTION A - PROBLEMS

1. Statewide Land Use Inventory. The main problem that exists in this section of the LANDSAT contract is the incomplete coverage of the State at this point in time. A second, however, more minor problem is the collection of appropriate ground observation information for the Bendix subcontractor to use.
2. Socio-Economic Merging with LANDSAT Data. We are now in Phase 2 of this particular portion of the study. The major problem is the collection of aerial photography to develop the model into which LANDSAT data will be entered when it becomes available.
3. Services Development. No problems at this time.

SECTION B - ACCOMPLISHMENTS

1. Statewide Land Use Inventory. At this point in time the Bendix Aerospace people have processed four scenes over Ohio. Six of the seven level 1 land use classes have appeared in these four scenes with the exception of wet lands. This categorization process is still in the stage of handling raw data and the geometric correction has not been begun. The development of a training package has now come to the point where it will be applied to the remaining scenes in the state. This training package implies tutorial and instructive techniques along with the appropriate materials to generate training sets for the Bendix system. The package has been designed and implementation of the tutorial training manual is now in its final stage. Three additional scenes are in-house at Bendix and are scheduled to be processed next quarter.

2. Socio-Economic Merge with LANDSAT Data. Phase I of this project has been completed and a report has been published and is included with this progress report. The report titled "The Ohio Land Allocation Model," describes that model and a survey of techniques utilizing remote sensing to obtain land use change. Also description as to the schedule of tasks for Phase II are included in which the merging of LANDSAT data with the land allocation model is described.
3. Service Product Development. Battelle Columbus Laboratories has developed a plan in coordination with state personnel to investigate prototype services or products in four areas: (1) all minerals surface mining; (2) Lake Erie/Sandusky Bay sedimentation; (3) urban and regional planning information; (4) economic and community development. Task 4 contains three subelements which are further defined here. First, for economic development, it was decided that a continuation of work in the forested area of Northeast Ohio would be valuable in seeing how well LANDSAT might delineate forested areas and help the economic development picture in this area. The second sub-task was to contact the Ohio Power Siting Commission in order to investigate the information needs for siting nuclear power facilities. Preliminary discussions with the Power Siting Commission have suggested that transmission corridors in relation to these nuclear power sites will be valuable. Thirdly, a refinement of the statewide land use inventory for urban areas will also be tackled by Battelle. The main emphasis here is that the Battelle output will be compatible with the OCAP system in the statewide land use inventory.

SECTION C. SIGNIFICANT RESULTS

1. None at this time.

SECTION D. PUBLICATIONS

1. The Ohio Land Allocation Model - Report on Phase I by Oscar Fisch and Steve I. Gordon submitted to the Department of Economic and Community Development January 19, 1976.

SECTION E. RECOMMENDATIONS

1. None

SECTION F. FUNDS EXPENDED

1. Total funds expended for this contract are \$13,819 of which \$5,973 are state cost sharing and \$7,846 are federal share.

SECTION G. DATA USE

| | <u>Value of Data Allowed</u> | <u>Value of Data Ordered</u> | <u>Value of Data Received</u> |
|----------|----------------------------------|----------------------------------|-----------------------------------|
| LANDSAT | \$16,700 | \$ 3,780 | \$ 3,780 |
| CCT | 5,600 | 1,800 | 1,800 |
| AIRCRAFT | 1,800 | 667 | 534 |

SECTION H. AIRCRAFT DATA

1. Duplicates of the August 18th NASA aims flight in color print form was made to provide ground observation data to Bendix Aerospace Corporation. At this point in time that data is still in process.